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EXAMINER	
NANO, SARGON N	

ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/864,524	LAKSONO, INDRA	
	Examiner	Art Unit	
	Sargon N. Nano	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 3/4/05.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-73 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-73 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Amendment

1. This action is responsive to amendment filed on March 4, 2005. Claims 1-73 are pending examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-73 are rejected under 35 U.S.C. 102(e) as being anticipated by Billmaier et al., U.S. Patent No. 6,710,815 (referred to hereafter as Billmaier).

As to claim 1, Billmaier teaches a multimedia system comprises: multimedia server operably coupled to receive a plurality of channels of a multimedia source, wherein the multimedia server includes:

tuning module operably coupled to receive the plurality of channels and to select transmission mediums); a set of channels from the plurality of channels based on a set of channel select commands that is derived from select requests (see col. 7 lines 4 – 11 and fig.5. Billmaier discloses software modules that receive multiple signals through different channels).

channel mixer operably coupled to mix the set of channels into a stream of channel data (see col.8 lines 15 - 23 Billmaier discloses mixing of multiple signals); and

transceiving module operably coupled to transmit the stream of channel data on to a communication path and to receive the select requests(see col. 3 line 64 – col. 4 line 18 , Billmaier discloses STB box which receives a signal athead end and transmit the signal to TV). ; and

client module that produces the select requests for at least one of a plurality of clients, wherein the at least one of the plurality of clients is operably coupled to receive at least a portion of the stream of channel data, wherein the client module includes: selection module operable to produce at least one of the select requests (see col.8 lines 15 – 26 and fig. 5, Billmaier discloses the selection of MPEG packets for a selected television channel) ; and

network interface controller operably coupled to transmit the at least one of select requests to the multimedia server and to receive the stream of channel data via the communication path (see col. 5 line 36 – col. 6 line 48 and fig. 3).

As to claim 2, Billmaier teaches the multimedia system of claim 1, wherein the plurality of clients comprises at least one of: a computer, a laptop computer, a personal digital assistant, a video telephone, a digital telephone, a cellular telephone, a monitor, a television, a high definition television, printer, and a facsimile machine (see fig. 1, Billmaier discloses a television set).

As to claim 3, Billmaier teaches the multimedia system of claim 1, wherein the multimedia server further comprises: control module operably to the tuning module, the channel mixer, and the transceiving module, wherein the control module interprets the select requests to produce the set of channel select commands, wherein the control module facilitates formatting the stream of channel data for transmission via the transceiving module, and wherein the control module facilitates deformatting of the select requests (see col. 4 lines 5 – 10 Billmaier discloses the encoding and decoding of the signal)

As to claim 4, Billmaier teaches the multimedia system of claim 3, wherein the communication path comprises at least one of: wireline connection, wherein the stream of channel data and the select requests are transceived via the wireline connection utilizing a type of transceiving that includes **at least one of**: time division multiplexing, frequency division multiplexing, pulse code modulation, amplitude shift keying, phase shift keying, quadrature phase shift keying, quadrature amplitude modulation, carrier sense multi-access (CSMA), CSMA with collision avoidance, and CSMA with collision detection; transmit wireline connection, wherein the stream of channel data is transmitted via the transmit wireline connection utilizing a type of transmission that includes at least one of: time division multiplexing, frequency division multiplexing, pulse code modulation, amplitude shift keying, phase shift keying, quadrature phase shift keying, quadrature amplitude modulation, carrier sense multi-access (CSMA), CSMA with collision avoidance, and CSMA with collision detection; receive wireline connection, wherein the select requests are received via the receive wireline connection utilizing a

type of reception that includes at least one of: time division multiplexing, frequency division multiplexing, pulse code modulation, amplitude shift keying, phase shift keying, quadrature phase shift keying, quadrature amplitude modulation, carrier sense multi-access (CSMA), CSMA with collision avoidance, and CSMA with collision detection;

radio frequency path, wherein the stream of channel data and the select requests are transceived via the radio frequency path utilizing the type of transceiving (see col.4 lines 19 – 25 Billmaier teaches radio frequency;

transmit radio frequency path, wherein the stream of channel data is transmitted via the transmit radio frequency path utilizing the type of transmission(see col. 4 lines 19 – 25 Billmaier discloses the use of a remote control utilizing radio frequency);

receive radio frequency path, wherein the select requests are received via the receive radio frequency path utilizing the type of reception (see col. 4 lines 19 – 25 Billmaier discloses the use of a remote control utilizing radio frequency);

infrared path, wherein the stream of channel data and the select requests are transceived via the infrared path utilizing the type of transceiving (see col. 4 lines 19 – 25 Billmaier discloses the use of a remote control utilizing infra red frequency);

transmit infrared path, wherein the stream of channel data is transmitted via the transmit infrared path utilizing the type of transmission(see col. 4 lines 19 – 25 Billmaier discloses the use of a remote control utilizing infra red frequency); and

receive infrared path, wherein the select requests are received via the receive infrared path utilizing the type of reception (see col. 5 lines 37 – 44 Billmaier discloses STB boxes may receiving infrared signal from a remote control);

As to claim 5, Billmaier teaches the multimedia system of claim 3, wherein the control module further comprises:

host processor, external I/O bus, host memory, memory bridge interoperably coupled to provide server control operations, wherein the server control operations include:

interpreting the select requests to produce the set of channel select commands (see col. 3 line 64 – col. 5 line 10 Billmaier discloses the encoding and the decoding of the signal) ; and

coordinating the mixing of the set of channels, formatting of the stream of channel data and transmitting the formatted channel data, such that a client of the plurality of clients receives appropriate requested data(see col. 4 , lines 11 – 17, Billmaier discloses the routing of transmission to specific destination).

As to claim 6, Billmaier teaches the multimedia system of claim 5, wherein the control module further comprises: hard drive operably coupled to store at least a portion of the stream of data (see fig. 3, item # 310,Billmaier discloses a storage device).

As to claim 7, Billmaier teaches the multimedia system of claim 3, wherein the control module further comprises: means for processing client access privileges for

each of the plurality of clients (see col. 3, lines 44 – 57, Billmaier discloses user selections).

As to claim 8, Billmaier teaches the multimedia system of claim 1, wherein the transceiving module further comprises: an analog multiplexor for converting the stream of channel data into analog signals, wherein the analog signals are transmitted to the at least one of the plurality of clients (see col.5, lines 56 – 65, Billmaier discloses back channel via analog line).

As to claim 9, Billmaier teaches the multimedia system of claim 1, wherein the multimedia server further comprises: second transceiving module operably coupled to transmit the stream of channel data via a second communication path (see fig.3 Billmaier discloses the primary and secondary signals).

As to claim 10, Billmaier teaches the multimedia system of claim 1, wherein the set of channel select commands comprises at least one of: audio channel select; video channel select; audio source; video source; volume adjust; picture quality settings and adjustments; displaying restrictions; purchase requests; picture-in-picture activation and deactivation; picture-in-picture channel select; video blanking; and audio muting(see col. 5, lines 28 – 36, Billmaier discloses the volume buttons).

As to claim 11, Billmaier teaches the multimedia system of claim 1, wherein the transceiving module further comprises: encoder operably coupled to encode the stream of data prior to transmitting the stream of channel data, wherein the encoder encodes the stream of data based on at least one of: multilevel encoding; non return to zero

(NRZ) encoding; Manchester encoding; block encoding; and nB/mB encoding, where n<m. (see col.7, lines 44 – 57 , Billmaier discloses the encoder).

As to claim 12, Billmaier teaches a multimedia system comprises:

multimedia server operably coupled to receive data from a plurality of multimedia sources and to provide a stream of channel data from channels associated with the plurality of multimedia sources based on a set of channel select commands wherein the set of channel select commands are derived from select requests(see col. 7 lines 4 – 11 and fig.5. Billmaier discloses software modules that receive multiple signals through different transmission mediums); and

a plurality of client modules operably coupled to the multimedia server to provide the select requests, wherein at least some of the plurality of client modules are operably coupled to a corresponding one of a plurality of clients, and wherein each of the corresponding ones of the plurality of clients displays at least a portion of the stream of channel data, wherein the at least a portion of the stream of channel data is based on at least one of the set of channel select commands provided to the multimedia server by an affiliated one of the at least some of the plurality of client modules requests (see col.8 lines 15 – 26 and fig. 5, Billmaier discloses the selection of MPEG packets for a selected television channel).

As to claim 13, Billmaier teaches the multimedia system of claim 12, wherein the multimedia server comprises:

tuning module operably coupled to receive the channels from the plurality of multimedia sources and to select a set of channels based on the set of channel select commands(see col. 7 lines 4 – 11 and fig.5. Billmaier discloses software modules that receive multiple signals through different transmission mediums);

channel mixer operably coupled to mix the set of channels into the stream of channel data(see col.8 lines 15 - 23 Billmaier discloses mixing of multiple signals);

transceiving module operably coupled to transmit the stream of channel data on to a communication path and to receive the select requests(see col. 3 line 64 – col. 4 line 18 , Billmaier discloses STB box which receives a signal athead end and transmit the signal to TV). ; and

control module operably to the tuning module, the channel mixer, and the transceiving module, wherein the control module interprets the select requests to produce the set of channel select commands, wherein the control module facilitates formatting the stream of channel data for transmission via the transceiving module, and wherein the control module facilitates deformatting of the select requests (see col. 4 , lines 5 - 10 Billmaier discloses the encoding and decoding of the signal).

As to claim 14, Billmaier teaches the multimedia system of claim 13, wherein each of the plurality of client modules comprises:

selection module operable to produce at least one of the select requests(see col.8 lines 15 – 26 and fig. 5, Billmaier discloses the selection of MPEG packets for a selected television channel); and

transmitting module operably coupled to the communication path to transmit the at least one of the select requests to the multimedia server(see col. 10 lines 18 – 33, Billmaier discloses the trasmititng of a program).

As to claim 15, Billmaier teaches the multimedia system of claim 13, wherein the communication path comprises at least one of:

wireline connection, wherein the stream of channel data and the select requests are transceived via the wireline connection utilizing a type of transceiving that includes at least one of: time division multiplexing, frequency division multiplexing, pulse code modulation, amplitude shift keying, phase shift keying, quadrature phase shift keying, quadrature amplitude modulation, carrier sense multi-access (CSMA), CSMA with collision avoidance, and CSMA with collision detection;

transmit wireline connection, wherein the stream of channel data is transmitted via the transmit wireline connection utilizing a type of transmission that includes at least one of: time division multiplexing, frequency division multiplexing, pulse code modulation, amplitude shift keying, phase shift keying, quadrature phase shift keying, quadrature amplitude modulation, carrier sense multi-access (CSMA), CSMA with collision avoidance, and CSMA with collision detection;

receive wireline connection, wherein the select requests are received via the receive wireline connection utilizing a type of reception that includes at least one of: time division multiplexing, frequency division multiplexing, pulse code modulation, amplitude shift keying, phase shift keying, quadrature phase shift keying, quadrature

amplitude modulation, carrier sense multi-access (CSMA), CSMA with collision avoidance, and CSMA with collision detection;

radio frequency path, wherein the stream of channel data and the select requests are transceived via the radio frequency path utilizing the type of transceiving (see col. 4 , lines 18 – 24 , Billmaier discloses , radio frequency) ;

transmit radio frequency path, wherein the stream of channel data is transmitted via the transmit radio frequency path utilizing the type of transmission(see col. 4 lines 19 – 25 Billmaier discloses the use of a remote control utilizing radio frequency); receive radio frequency path, wherein the select requests are received via the receive radio frequency path utilizing the type of reception;infrared path, wherein the stream of channel data and the select requests are transceived via the infrared path utilizing the type of transceiving (see col. 4 lines 19 – 25 Billmaier discloses the use of a remote control utilizing radio frequency;

transmit infrared path, wherein the stream of channel data is transmitted via the transmit infrared path utilizing the type of transmission (see col. 4 lines 19 – 25 Billmaier discloses the use of a remote control utilizing radio frequency; and

receive infrared path, wherein the select requests are received via the receive infrared path utilizing the type of reception(see col. 4 lines 19 – 25 Billmaier discloses the use of a remote control utilizing radio frequency;

As to claim 16, Billmaier teaches the multimedia system of claim 13, wherein the control module further comprises: host processor, external I/O bus, host memory,

memory bridge interoperably coupled to provide server control operations, wherein the server control operations include:

interpreting the select requests to produce the set of channel select commands(see col. 3 line 64 – col. 5 line 10 Billmaier discloses the encoding and the decoding of the signal); and

coordinating the mixing of the set of channels, formatting of the stream of channel data and transmitting the formatted channel data, such that a client of the plurality of clients receives appropriate requested data(see col. 3 line 64 – col. 5 line 10 Billmaier discloses the encoding and the decoding of the signal).

As to claim 17, Billmaier teaches the multimedia system of claim 16, wherein the control module further comprises: hard drive operably coupled to store at least a portion of the stream of data(see fig. 3, item # 310,Billmaier discloses a storage device).

As to claim 18, Billmaier teaches the multimedia system of claim 13, wherein the control module further comprises: means for processing client access privileges for each of the plurality of clients(see col. 3, lines 44 – 57, Billmaier discloses user selections).

As to claim 19, Billmaier teaches the multimedia system of claim 13, wherein the transceiving module further comprises: encoder operably coupled to encode the stream of data prior to transmitting the stream of channel data, wherein the encoder encodes the stream of data based on at least one of: multilevel encoding; non return to zero

(NRZ) encoding; Manchester encoding; block encoding; and nB/mB encoding, where n<m. . (see col.7, lines 44 – 57 , Billmaier discloses the encoder).

As to claim 20, Billmaier teaches a multimedia server for using a multimedia system, the multimedia server comprises:

tuning module operably coupled to receive a plurality of channels from a multimedia source and to select a set of channels from the plurality of channels based on a set of channel select commands that is derived from select requests(see col. 7 lines 4 – 11 and fig.5. Billmaier discloses software modules that receive multiple signals through different transmission mediums);

channel mixer operably coupled to mix the set of channels into a stream of channel data(see col.8 lines 15 - 23 Billmaier discloses mixing of multiple signals; and

transceiving module operably coupled to transmit the stream of channel data on to a communication path and to receive the select requests from at least one client module affiliated with at least one of a plurality of clients (see col. 3 line 64 – col. 4 line 18 , Billmaier discloses STB box which receives a signal athead end and transmit the signal to TV).

As to claim 21, Billmaier teaches the multimedia server of claim 20 further comprises: control module operably to the tuning module, the channel mixer, and the transceiving module, wherein the control module interprets the select requests to produce the set of channel select commands, wherein the control module facilitates formatting the stream of channel data for transmission via the transceiving module, and

wherein the control module facilitates deformatting of the select requests(see col. 4 , lines 5 - 10 Billmaier discloses the encoding and decoding of the signal).

As to claim 22, Billmaier teaches the multimedia server of claim 21, wherein the communication path comprises at least one of:

wireline connection, wherein the stream of channel data and the select requests are transceived via the wireline connection utilizing a type of transceiving that includes at least one of: time division multiplexing, frequency division multiplexing, pulse code modulation, amplitude shift keying, phase shift keying, quadrature phase shift keying, quadrature amplitude modulation, carrier sense multi-access (CSMA), CSMA with collision avoidance, and CSMA with collision detection;

transmit wireline connection, wherein the stream of channel data is transmitted via the transmit wireline connection utilizing a type of transmission that includes at least one of: time division multiplexing, frequency division multiplexing, pulse code modulation, amplitude shift keying, phase shift keying, quadrature phase shift keying, quadrature amplitude modulation, carrier sense multi-access (CSMA), CSMA with collision avoidance, and CSMA with collision detection;

receive wireline connection, wherein the select requests are received via the receive wireline connection utilizing a type of reception that includes at least one of: time division multiplexing, frequency division multiplexing, pulse code modulation, amplitude shift keying, phase shift keying, quadrature phase shift keying, quadrature

amplitude modulation, carrier sense multi-access (CSMA), CSMA with collision avoidance, and CSMA with collision detection;

radio frequency path, wherein the stream of channel data and the select requests are transceived via the radio frequency path utilizing the type of transceiving;

transmit radio frequency path, wherein the stream of channel data is transmitted via the transmit radio frequency path utilizing the type of transmission(see col. 4 lines 19 – 25 Billmaier discloses the use of a remote control utilizing radio frequency);

receive radio frequency path, wherein the select requests are received via the receive radio frequency path utilizing the type of reception(see col. 4 lines 19 – 25 Billmaier discloses the use of a remote control utilizing radio frequency);

infrared path, wherein the stream of channel data and the select requests are transceived via the infrared path utilizing the type of transceiving (see col. 4 lines 19 – 25 Billmaier discloses the use of a remote control utilizing infra red frequency);

transmit infrared path, wherein the stream of channel data is transmitted via the transmit infrared path utilizing the type of transmission (see col. 4 lines 19 – 25 Billmaier discloses the use of a remote control utilizing infra red frequency);

and receive infrared path, wherein the select requests are received via the receive infrared path utilizing the type of reception(see col. 5 lines 37 – 44 Billmaier discloses STB boxes may receiving infrared signal from a remote control).

As to claim 23, Billmaier teaches the multimedia server of claim 22, wherein the transceiving module further comprises, when the communication path includes the wireline connection:

router operably coupled to the channel mixer, to the tuning module, to the control module, to the client module via the wireline connection, and to the at least one of the plurality of clients via the wireline connection,

wherein the control module formats the stream of channel data based on the type of transceiving to produce formatted channel data (see col. 4, lines 44 – 57 , Billmaier discloses formatted data).

wherein the router provides the formatted channel data to the at least one of the plurality of clients during transmitting intervals on the wireline connection(see col. 7 lines 1 – 45, and fig.5 , Billmaier discloses the formatted data)

wherein the client module causes the select requests to be formatted based on the type of transceiving to produce formatted select requests(see col. 7 lines 1 – 57, and fig.5 , Billmaier discloses the formatted data)

wherein the router receives the formatted select requests via the wireline connection during receiving intervals on the wireline connection (see col. 4, lines 44 – 57 , Billmaier discloses formatted data), and

wherein the control module determines the transmitting intervals and the receiving intervals(see col. 7 lines 37 – 45 Billmaier discloses the latency of the transmission).

As to claim 24, Billmaier teaches the multimedia server of claim 22, wherein the transceiving module further comprises, when the communication path includes the transmit wireline connection:

transmission router operably coupled to the control module and the channel mixer(see fig. 5 , Billmaier discloses a mixer coupled to a presentation),

wherein the control module causes the stream of channel data to be formatted based on the type of transmission to produce formatted channel data(see col. 7 lines 1 – 57, and fig.5 , Billmaier discloses the formatted data), and

wherein the transmission router provides the formatted channel data to the at least one of the plurality of clients (see col. 7 lines 1 – 57, and fig.5 , Billmaier discloses the formatted data).

As to claim 25, Billmaier teaches the multimedia server of claim 22, wherein the transceiving module further comprises, when the communication path includes the receive wireline connection: reception router operably coupled to the control module, wherein the client module formats at least one of: the select requests and inbound data based on the type of reception to produce formatted reception data, and wherein the reception router receives the formatted reception data via the wireline connection.(see col. 7 lines 1 – 57, and fig.5 , Billmaier discloses the formatted data).

As to claim 26, Billmaier teaches the multimedia server of claim 22, wherein the transceiving module further comprises, when the communication path includes the radio frequency path:

radio frequency transceiving switch operably coupled to the channel mixer, to the tuning module, to the control module, to the client module via the radio frequency path, and to the at least one of the plurality of clients via the radio frequency path(see col. 4 lines 19 – 25 Billmaier discloses the use of a remote control utilizing radio frequency);

wherein the control module causes the stream of channel data to be formatted based on the type of transceiving to produce formatted channel data,(see col. 3 lines 45 - 57, Billmaier discloses formatted data).

wherein the radio frequency transceiving switch provides the formatted channel data to the at least one of the plurality of clients during transmitting intervals on the radio frequency path,(see col. 3 lines 45 - 57, Billmaier discloses formatted data).

wherein the client module formats the select requests based on the type of transceiving to produce formatted select requests ,(see col. 3 lines 45 - 57, Billmaier discloses formatted data).

wherein the radio frequency transceiving switch receives the formatted select requests via the radio frequency path during receiving intervals on the radio frequency path (see col. 3 lines 58 – 63). and

wherein the control module determines the transmitting intervals and the receiving intervals (see col. 4 lines 34 – 66, Billmaier discloses formatted data is transmitted with a low latency).

As to claim 27, Billmaier teaches the multimedia server of claim 22, wherein the transceiving module further comprises, when the communication path includes the transmit radio frequency path:

radio frequency transmitting switch operably coupled to the control module and the channel mixer(see col. 4 lines 19 – 25 Billmaier discloses the use of a remote control utilizing radio frequency);

wherein the control module causes the stream of channel data to be formatted based on the type of transmission to produce formatted channel data,(see col. 3 lines 45 - 57, Billmaier discloses formatted data).,

wherein the radio frequency transmitting switch provides the formatted channel data to the at least one of the plurality of clients via the transmit radio frequency path(see col. 4 lines 36 – 46 , and fig. 1, Billmaier discloses the receiving of the signal by a TV set).

As to claim 28, Billmaier teaches the multimedia server of claim 22, wherein the transceiving module further comprises, when the communication path includes the receive radio frequency path:

radio frequency receiving switch operably coupled to the control module(see col. 4 lines 19 – 25 Billmaier discloses the use of a remote control utilizing radio frequency);

wherein the client module formats at least one of: the select requests and inbound data based on the type of reception to produce formatted reception data (see col. 3 lines 45 – 57 Billmaier discloses the formatted data). and

wherein the radio frequency receiving switch receives the formatted reception data via the receive radio frequency path (see fig. 3).

As to claim 29 ,Billmaier teaches the multimedia server of claim 22, wherein the transceiving module further comprises, when the communication path includes the infrared path:

infrared transceiving switch operably coupled to the channel mixer, to the tuning module, to the control module, to the client module via the infrared path, and to the at least one of the plurality of clients via the infrared path, (see col. 4 lines 19 – 25 Billmaier discloses the use of a remote control utilizing infra red frequency);

wherein the control module causes the stream of channel data to be formatted based on the type of transceiving to produce formatted channel data, wherein the infrared transceiving switch provides the formatted channel data to the at least one of the plurality of clients during transmitting intervals on the infrared path (see col. 3 lines 45 – 57 Billmaier discloses the formatted data).

wherein the client module causes the select requests to be formatted based on the type of transceiving to produce formatted select requests(see col. 3 lines 45 – 57 Billmaier discloses the formatted data).

wherein the infrared transceiving switch receives the formatted select requests via the infrared path during receiving intervals on the infrared path (see col. 4 lines 19 – 25 Billmaier discloses the use of a remote control utilizing infra red frequency);

and wherein the control module determines the transmitting intervals and the receiving intervals(see col. 8 lines lines 53 – 59 , Billmaier discloses the latency of transmission can be determined by the buffer);

As to claim 30, Billmaier teaches the multimedia server of claim 22, wherein the transceiving module further comprises, when the communication path includes the transmit infrared path:

infrared transmitting switch operably coupled to the control module and the channel mixer(see col.8 lines 15 - 23 Billmaier discloses mixing of multiple signals),

wherein the control module formats the stream of channel data based on the type of transmission to produce formatted channel data (see col. 3 lines 45 – 57 Billmaier discloses the formatted data).

wherein the infrared transmitting switch provides the formatted channel data to the at least one of the plurality of clients via the transmit infrared path(see col. 4 lines 19 – 25 Billmaier discloses the use of a remote control utilizing infra red frequency);

As to claim 31, Billmaier teaches the multimedia server of claim 22, wherein the transceiving module further comprises, when the communication path includes the receive infrared path:

infrared receiving switch operably coupled to the control module, wherein the client module formats at least one of:

the select requests and inbound data based on the type of reception to produce formatted reception data, and wherein the infrared receiving switch receives the formatted reception data via the receive infrared path (see col. 4 lines 20 – 25 and fig. 1 Billmaier discloses the STB receiving the infrared signal) .

As to claim 32, Billmaier teaches the multimedia server of claim 21, wherein the control module further comprises: host processor, external I/O bus, host memory, memory bridge interoperably coupled to provide server control operations, wherein the server control operations include: interpreting the select requests to produce the set of channel select commands (see col. 4 lines 20 – 25 and fig. 1 Billmaier discloses the STB receives the signal from the remote control); and coordinating the mixing of the set of channels, formatting of the stream of channel data and transmitting the formatted channel data, such that a client of the plurality of clients receives appropriate requested data (see col. 4 lines 5 – 10. Billmaier discloses the formatted signals).

As to claim 33, Billmaier teaches the multimedia server of claim 32, wherein the control module further comprises: hard drive operably coupled to store at least a portion

of the stream of data (see col. 6 lines 21- 26 Billmaier discloses the storage device is a hard disk drive).

As to claim 34, Billmaier teaches the multimedia server of claim 21, wherein the control module further comprises: means for processing client access privileges for each of the plurality of clients(see col. 3, lines 44 – 57, Billmaier discloses user selections).

As to claim 35, Billmaier teaches the multimedia server of claim 20, wherein the transceiving module further comprises: an analog multiplexor for converting the stream of channel data into analog signals, wherein the analog signals are transmitted to the at least one of the plurality of clients (see col. 6 lines 11 – 20 , Billmaier discloses analog signals for display and playback).

As to claim 36, Billmaier teaches the multimedia server of claim 20 further comprises: second transceiving module operably coupled to transmit the stream of channel data via a second communication path. (see fig.3 Billmaier discloses the primary and secondary signals).

As to claim 37, Billmaier teaches the multimedia server of claim 20, wherein the transceiving module further comprises: encoder operably coupled to encode the stream of data prior to transmitting the stream of channel data, wherein the encoder encodes the stream of data based on at least one of: multilevel encoding; non return to zero (NRZ) encoding; Manchester encoding; block encoding; and nB/mB encoding, where $n<m$ (see col.7, lines 44 – 57 , Billmaier discloses the encoder).

As to claim 38, Billmaier teaches a method for providing multimedia services to a local area network, the method comprises:

receiving a plurality of channels from at least one multimedia source(see col. 7 lines 4 – 11 and fig.5. Billmaier discloses software modules that receive multiple signals);

receiving select requests from at least one client module via a communication path; generating a set of channel select commands from the select requests(see col. 3 line 64 – col. 4 line 18 , Billmaier discloses STB box which receives a signal athead end and transmit the signal to TV).

selecting a set of channels from the plurality of channels based on the set of channel select commands(see col.8 lines 15 – 26 and fig. 5, Billmaier discloses the selection of MPEG packets for a selected television channel);

mixing the set of channels into a stream of channel data(see col.8 lines 15 - 23 Billmaier discloses mixing of multiple signals); and

transmitting the stream of channel data on to the communication path such that at least one of a plurality of clients receives at least a portion of the stream of channel data(see col.8 lines 15 – 26 and fig. 5, Billmaier discloses the selection of MPEG packets for a selected television channel).

As to claim 39, Billmaier teaches the method of claim 38 further comprises: interpreting the select requests to produce the set of channel select commands (see col.

3 line 64 – col. 5 line 10 Billmaier discloses the encoding and the decoding of the signal);

formatting the stream of channel data for transmission via the transceiving module; deformatting of the select requests as part of generating the set of channel select commands(see col. 3 line 64 – col. 5 line 10 Billmaier discloses the encoding and the decoding of the signal);

As to claim 40, Billmaier teaches the method of claim 38, wherein the communication path comprises at least one of:

wireline connection, wherein the stream of channel data and the select requests are transceived via the wireline connection utilizing a type of transceiving that includes at least one of: time division multiplexing, frequency division multiplexing, pulse code modulation, amplitude shift keying, phase shift keying, quadrature phase shift keying, quadrature amplitude modulation, carrier sense multi-access (CSMA), CSMA with collision avoidance, and CSMA with collision detection;

transmit wireline connection, wherein the stream of channel data is transmitted via the transmit wireline connection utilizing a type of transmission that includes at least one of: time division multiplexing, frequency division multiplexing, pulse code modulation, amplitude shift keying, phase shift keying, quadrature phase shift keying, quadrature amplitude modulation, carrier sense multi-access (CSMA), CSMA with collision avoidance, and CSMA with collision detection; receive wireline connection, wherein the select requests are received via the receive wireline connection utilizing a type of

reception that includes at least one of: time division multiplexing, frequency division multiplexing, pulse code modulation, amplitude shift keying, phase shift keying, quadrature phase shift keying, quadrature amplitude modulation, carrier sense multi-access (CSMA), CSMA with collision avoidance, and CSMA with collision detection;

radio frequency path, wherein the stream of channel data and the select requests are transceived via the radio frequency path utilizing the type of transceiving(see col.4 lines 19 – 25 Billmaier teaches radio frequency;

transmit radio frequency path, wherein the stream of channel data is transmitted via the transmit radio frequency path utilizing the type of transmission(see col. 4 lines 19 – 25 Billmaier discloses the use of a remote control utilizing radio frequency);

receive radio frequency path, wherein the select requests are received via the receive radio frequency path utilizing the type of reception(see col. 4 lines 19 – 25 Billmaier discloses the use of a remote control utilizing radio frequency);

infrared path, wherein the stream of channel data and the select requests are transceived via the infrared path utilizing the type of transceiving (see col. 4 lines 19 – 25 Billmaier discloses the use of a remote control utilizing infra red frequency);

transmit infrared path, wherein the stream of channel data is transmitted via the transmit infrared path utilizing the type of transmission(see col. 4 lines 19 – 25 Billmaier discloses the use of a remote control utilizing infra red frequency);

and receive infrared path, wherein the select requests are received via the receive infrared path utilizing the type of reception(see col. 5 lines 37 – 44 Billmaier discloses STB boxes may receiving infrared signal from a remote control).

As to claim 41, Billmaier teaches the method of claim 40 further comprises, when the communication path includes the wireline connection:

formatting the stream of channel data based on the type of transceiving to produce formatted channel data(see col. 4 lines 5 – 10 Billmaier discloses the formatting the decodng of the signal) ,

providing the formatted channel data to the at least one of the plurality of clients during transmitting intervals on the wireline connection(see col. 4 line 11 – 18, Billmaier discloses information is transmitted to a specific STB),

receiving formatted select requests via the wireline connection during receiving intervals on the wireline connection, wherein the client module formats the select requests based on the type of transceiving (see col. 4 line 11 – 18, Billmaier discloses information is transmitted to a specific STB); and

determining the transmitting intervals and the receiving intervals (see col. 7 lines37 – 44, Billmaier discloses the calculated buffering peior),

As to claim 42, Billmaier teaches the method of claim 40 further comprises, when the communication path includes the transmit wireline connection:

formatting the stream of channel data based on the type of transmission to produce formatted channel data(see col. 4 lines 5 – 10 Billmaier discloses the formatting the decodng of the signal) , and

providing the formatted channel data to the at least one of the plurality of clients (see col. 4 line 11 – 18, Billmaier discloses information is transmitted to a specific STB),

As to claim 43, Billmaier teaches the method of claim 40 further comprises, when the communication path includes the receive wireline connection: receiving formatted reception data via the wireline connection, wherein the client module formats at least one of: the select requests and inbound data based on the type of reception to produce formatted reception data (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 44, Billmaier teaches the method of claim 40 further comprises, when the communication path includes the radio frequency path: formatting the stream of channel data based on the type of transceiving to produce formatted channel data; providing the formatted channel data to the at least one of the plurality of clients during transmitting intervals on the radio frequency path; receiving formatted select requests via the radio frequency path during receiving intervals on the radio frequency path, wherein the client module formats the select requests based on the type of transceiving to produce the formatted select requests; and determining the transmitting intervals and the receiving intervals (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 45, Billmaier teaches the method of claim 40 further comprises, when the communication path includes the transmit radio frequency path: formatting the stream of channel data based on the type of transmission to produce formatted channel data; and providing the formatted channel data to the at least one of the plurality of clients via the transmit radio frequency path (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 46, Billmaier teaches the method of claim 40 further comprises, when the communication path includes the receive radio frequency path: receiving formatted reception data via the receive radio frequency path, wherein the client module formats at least one of: the select requests and inbound data based on the type of reception to produce the formatted reception data (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 47, Billmaier teaches the method of claim 40 further comprises, when the communication path includes the infrared path: formatting the stream of channel data based on the type of transceiving to produce formatted channel data; providing the formatted channel data to the at least one of the plurality of clients during transmitting intervals on the infrared path; receiving formatted select requests via the infrared path during receiving intervals on the infrared path, wherein the client module formats the select requests based on the type of transceiving to produce the formatted select requests; and determining the transmitting intervals and the receiving intervals (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 48, Billmaier teaches the method of claim 40 further comprises, when the communication path includes the transmit infrared path: formatting the stream of channel data based on the type of transmission to produce formatted channel data; and providing the formatted channel data to the at least one of the plurality of clients via the transmit infrared path (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 49 Billmaier teaches the method of claim 40 further comprises, when the communication path includes the receive infrared path: receiving formatted reception data via the receive infrared path, wherein the client module formats at least one of: the select requests and inbound data based on the type of reception to produce the formatted reception data (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 50, Billmaier teaches the method of claim 38 further comprises; interpreting the select requests to produce the set of channel select commands; and coordinating the mixing of the set of channels, formatting of the stream of channel data and transmitting the formatted channel data, such that a client of the plurality of clients receives appropriate requested data (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 51, Billmaier teaches the method of claim 38 further comprises: storing at least a portion of the stream of data on a hard drive (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 52, Billmaier teaches the method of claim 38 further comprises: processing client access privileges for each of the plurality of clients (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 53, Billmaier teaches the method of claim 38 further comprises: converting the stream of channel data into analog signals, wherein the analog signals are transmitted to the at least one of the plurality of clients (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 54, Billmaier teaches the method of claim 38 further comprises: transmitting the stream of channel data via a second communication path (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 55, Billmaier teaches the method of claim 38, wherein transmitting the stream of channel data on to the communication path further comprises: encoding the stream of data prior to transmitting the stream of channel data, wherein the encoding of the stream of data is based on at least one of: multilevel encoding; non return to zero (NRZ) encoding; Manchester encoding; block encoding; and nB/mB encoding, where n<m (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 56, Billmaier teaches an apparatus for providing multimedia services to a local area network, the apparatus comprises: processing module; and memory

operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to: receive a plurality of channels from at least one multimedia source; receive select requests from at least one client module via a communication path; generate a set of channel select commands from the select requests; select a set of channels from the plurality of channels based on the set of channel select commands; mix the set of channels into a stream of channel data; and transmit the stream of channel data on to the communication path such that at least one of a plurality of clients, receives at least a portion of the stream of channel data (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 57, Billmaier teaches the apparatus of claim 56, wherein the memory further comprises operational instructions that cause the processing module to: interpret the select requests to produce the set of channel select commands; formatting the stream of channel data for transmission via the transceiving module; and deformatting of the select requests as part of generating the set of channel select commands (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 58, Billmaier teaches the apparatus of claim 56, wherein the communication path comprises at least one of: wireline connection, wherein the stream of channel data and the select requests are transceived via the wireline connection utilizing a type of transceiving that includes at least one of: time division multiplexing, frequency division multiplexing, pulse code modulation, amplitude shift keying, phase

shift keying, quadrature phase shift keying, quadrature amplitude modulation, carrier sense multi-access (CSMA), CSMA with collision avoidance, and CSMA with collision detection; transmit wireline connection, wherein the stream of channel data is transmitted via the transmit wireline connection utilizing a type of transmission that includes at least one of: time division multiplexing, frequency division multiplexing, pulse code modulation, amplitude shift keying, phase shift keying, quadrature phase shift keying, quadrature amplitude modulation, carrier sense multi-access (CSMA), CSMA with collision avoidance, and CSMA with collision detection; receive wireline connection, wherein the select requests are received via the receive wireline connection utilizing a type of reception that includes at least one of: time division multiplexing, frequency division multiplexing, pulse code modulation, amplitude shift keying, phase shift keying, quadrature phase shift keying, quadrature amplitude modulation, carrier sense multi-access (CSMA), CSMA with collision avoidance, and CSMA with collision detection; radio frequency path, wherein the stream of channel data and the select requests are transceived via the radio frequency path utilizing the type of transceiving; transmit radio frequency path, wherein the stream of channel data is transmitted via the transmit radio frequency path utilizing the type of transmission; receive radio frequency path, wherein the select requests are received via the receive radio frequency path utilizing the type of reception; infrared path, wherein the stream of channel data and the select requests are transceived via the infrared path utilizing the type of transceiving; transmit infrared path, wherein the stream of channel data is transmitted via the transmit infrared path utilizing the type of transmission; and receive infrared path, wherein the select requests are

received via the receive infrared path utilizing the type of reception (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 59, Billmaier teaches the apparatus of claim 58, wherein the memory further comprises operation instructions that cause the processing module to, when the communication path includes the wireline connection: format the stream of channel data based on the type of transceiving to produce formatted channel data, provide the formatted channel data to the at least one of the plurality of clients during transmitting intervals on the wireline connection, receive formatted select requests via the wireline connection during receiving intervals on the wireline connection, wherein the client module formats the select requests based on the type of transceiving; and determine the transmitting intervals and the receiving intervals (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13).

As to claim 60, Billmaier teaches the apparatus of claim 58, wherein the memory further comprises operation instructions that cause the processing module to, when the communication path includes the transmit wireline connection: format the stream of channel data based on the type of transmission to produce formatted channel data, and provide the formatted channel data to the at least one of the plurality of clients (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 61, Billmaier teaches the apparatus of claim 58, wherein the memory further comprises operation instructions that cause the processing module to, when the communication path includes the receive wireline connection: receive formatted reception data via the wireline connection, wherein the client module formats at least one of: the select requests and inbound data based on the type of reception to produce formatted reception data (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 62, Billmaier teaches the apparatus of claim 58, wherein the memory further comprises operation instructions that cause the processing module to, when the communication path includes the radio frequency path: format the stream of channel data based on the type of transceiving to produce formatted channel data; provide the formatted channel data to the at least one of the plurality of clients during transmitting intervals on the radio frequency path; receive formatted select requests via the radio frequency path during receiving intervals on the radio frequency path, wherein the client module formats the select requests based on the type of transceiving to produce the formatted select requests; and determine the transmitting intervals and the receiving intervals (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 63, Billmaier teaches the apparatus of claim 58, wherein the memory further comprises operation instructions that cause the processing module to, when the communication path includes the transmit radio frequency path: format the stream of channel data based on the type of transmission to produce formatted channel data; and

provide the formatted channel data to the at least one of the plurality of clients via the transmit radio frequency path (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 64, Billmaier teaches the apparatus of claim 58, wherein the memory further comprises operation instructions that cause the processing module to, when the communication path includes the receive radio frequency path: receive formatted reception data via the receive radio frequency path, wherein the client module formats at least one of: the select requests and inbound data based on the type of reception to produce the formatted reception data (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 65, Billmaier teaches the apparatus of claim 58, wherein the memory further comprises operation instructions that cause the processing module to, when the communication path includes the infrared path: format the stream of channel data based on the type of transceiving to produce formatted channel data; provide the formatted channel data to the at least one of the plurality of clients during transmitting intervals on the infrared path; receive formatted select requests via the infrared path during receiving intervals on the infrared path, wherein the client module formats the select requests based on the type of transceiving to produce the formatted select requests; and determine the transmitting intervals and the receiving intervals (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 66, Billmaier teaches the apparatus of claim 58, wherein the memory further comprises operation instructions that cause the processing module to, when the communication path includes the transmit infrared path: format the stream of channel data based on the type of transmission to produce formatted channel data; and provide the formatted channel data to the at least one of the plurality of clients via the transmit infrared path (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 67, Billmaier teaches the apparatus of claim 58, wherein the memory further comprises operation instructions that cause the processing module to, when the communication path includes the receive infrared path: receive formatted reception data via the receive infrared path, wherein the client module formats at least one of: the select requests and inbound data based on the type of reception to produce the formatted reception data (see col. 3 lines 25-col. 4 lines 56, and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 68, Billmaier teaches the apparatus of claim 56, wherein the memory further comprises operation instructions that cause the processing module to: interpret the select requests to produce the set of channel select commands; and coordinate the mixing of the set of channels, formatting of the stream of channel data and transmitting the formatted channel data, such that a client of the plurality of clients receives appropriate requested data (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 69, Billmaier teaches the apparatus of claim 56, wherein the memory further comprises operation instructions that cause the processing module to: store at least a portion of the stream of data on a hard drive (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 70, Billmaier teaches the apparatus of claim 56, wherein the memory further comprises operation instructions that cause the processing module to: process client access privileges for each of the plurality of clients (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 71, Billmaier teaches the apparatus of claim 56, wherein the memory further comprises operation instructions that cause the processing module to: convert the stream of channel data into analog signals, wherein the analog signals are transmitted to the at least one of the plurality of clients (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 72, Billmaier teaches the apparatus of claim 56, wherein the memory further comprises operation instructions that cause the processing module to: transmit the stream of channel data via a second communication path (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

As to claim 73, Billmaier teaches the apparatus of claim 56, wherein the memory further comprises operation instructions that cause the processing module to: encode the stream of data prior to transmitting the stream of channel data, wherein the encoding of the stream of data is based on at least one of: multilevel encoding; non

return to zero (NRZ) encoding; Manchester encoding; block encoding; and nB/mB encoding, where n<m (see col. 3 lines 25-col. 4 lines 56, col. 5 lines 35-col. 6 lines 45 and col. 7 lines 20-col. 8 lines 13 and fig. 5).

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Distributed internet protocol-based real-time multimedia streaming architecture by Bushmitch, U.S. Patent No. 5,928,331

Response to Argument

Applicant 's argument filed have been fully considered but they are not persuasive. In remarks applicant argue in substance that A) Billmaier's set up box does not communicate via a communication path and a network interface controller with the multimedia server where the multimedia server comprises channel mixer and transceiver. B) Billmaier's set up box does not disclose a multimedia server and a client module that communicate a stream of channel data and channel select commands via a path.

Billmaier discloses signals received through different transmission mediums are synchronized within a set up box for subsequent mixing and presentation (see abstract). In response to A) Billmaier discloses receiving multiple content sources (multiple channels) from a network via a broadband cable network to a head end. The head end it is interpreted as a multimedia server, where the multimedia server in turn sends the

multiple content sources to the STB where different signals are mixed (see col. 4 line 46 – col. 5 line 27). Claim does not specifically state that channel mixer and transceiver reside on the multimedia server and therefore STB meets the scope of the claimed limitation 'channel mixer and transceiving module". In response to B) Head end streams first and second signal to the STB box, where first and second may have different latency because they are sent by a primary content source and a secondary content source (see col. 4 line 46 – col. 5 line 27).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sargon N. Nano whose telephone number is (571) 272-4007. The examiner can normally be reached on 8 hour.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sargon Nano

May 25, 2005

ARIO ETIENNE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100